

**NORTH CAROLINA
LAPIDARY SOCIETY**

**October
1982**



Stone Cutter

MEETINGS: *SUNDAY*
Third ~~Thursday~~ each month.
GEMCRAFTERS
2106 Patterson St.
Greensboro, NC 27407

NOTE CHANGE
OF MEETING
DAY AND TIME



MEETING DATE : October 17, 1982
TIME : 2:30 PM
PLACE : GEMCRAFTERS
2106 Patterson St.
Greensboro, NC
PROGRAM : John Bayer has arranged to present two
slide programs from the Western Electric Co.
on the growing of synthetic crystals.
ALSO - Report of the Nominating Committee.
Elections will be in November.

} NOTE CHANGE
THIS IS SUNDAY!

OFFICERS 1982

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Liberty, NC 27298

EXECUTIVE BOARD meets at the call of the president.

MEMBERSHIP DUES : \$12.00 per year - prorated quarterly.

STONE CUTTER subscriptions: \$5.00 per year.

STONE CUTTER advertising rates: full page, \$40.00; half
page, \$20.00; quarter page, \$ 10.00.

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FROM THE EDITOR'S DESK

THIS ISSUE - Many faceters have written recently requesting cutting instructions for cushion or regent shaped stones. In this issue we present several such designs reprinted from STONE CUTTER and FACETS, Bulletin of the Columbia-Willamette Faceters' Guild of Portland Oregon.

WHERE TO FIND FACETING INFORMATION - Without question the most current and up-to-date information on faceting and the faceting hobby is published in the periodicals listed below. If you are serious about your hobby, most of the following should be on your "must have" list.

The nationally circulated hobby magazines. Copies of most of these are available in most rock shops and club libraries. Review these before subscribing to select the one(s) that best cover your area of interest.

FACETS, monthly Bulletin of the Columbia- Willamette Faceters' Guild of Portland, Oregon. Available by subscription at \$5.00 per year. A new faceting design each month. Many outstanding articles. Address:

3407 S.E. 120th Ave.
Portland, OR 97266

CWFG also offers CORRESPONDENT MEMBERSHIP for \$15.00 per year. An extensive file of facet designs is maintained and copies are available to members for the cost of reproduction and mailing.

ANGLES, monthly publication of the Faceters' Guild of Southern California. Available by subscription at \$7.50 per year. Original designs and articles.

Address:
P. O. Box 11269
Costa Mesa, CA 92627

THE MIDWEST FACETER, quarterly publication of the Midwest Faceters' Guild. Available by membership at \$5.00 per year or portion. Designs and articles.

Address:
Art Kalinski
3357 Doremus
Hamtramck, MI 48212

SEATTLE FACET BOOKS, Four volumes covering Ovals, Marquise, Heart & Pear and Cut Corner Rectangles (Emerald) by Bob Long and Norm Steele. Outstanding discussions of the mathematics of facet design with many new designs in each volume. Inquire for prices.

Address:
Seattle Facet Books
2232 78th Ave. SE
Mercer Island, WA 98040

NOTE: No attempt has been made to list the many how-to-facet books that are available at your local rock shop. These are all excellent though some of the information is outdated. You can teach yourself to facet by careful study of these books.

the Gabriel Regent

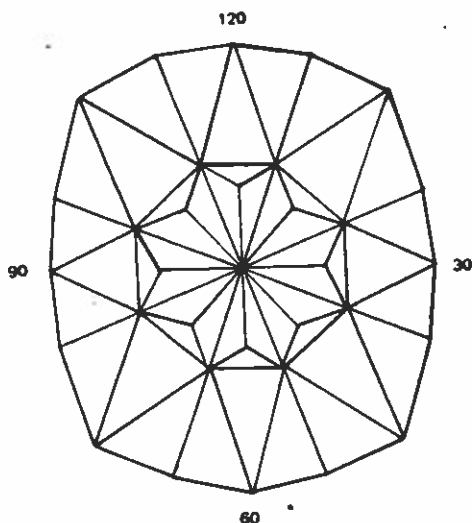
by Merle A. Reinikka

Here is an antique-cushion-type cut with horizontal split mains and vertical split culet, having a total of 113 facets. It is a tricky cut in that numerous of the facet-pairs are only half a degree different from adjoining facets. For this reason, cutting and polishing call for a high degree of accuracy throughout all phases of the operation.

The design is named for Tom and Samona Gabriel, who generously contributed the large piece of smoky quartz from which the prototype was made.

Angles given are for quartz, using a 120-tooth index gear. Minimum recommended size is 17 x 20 mm.

Pavilion



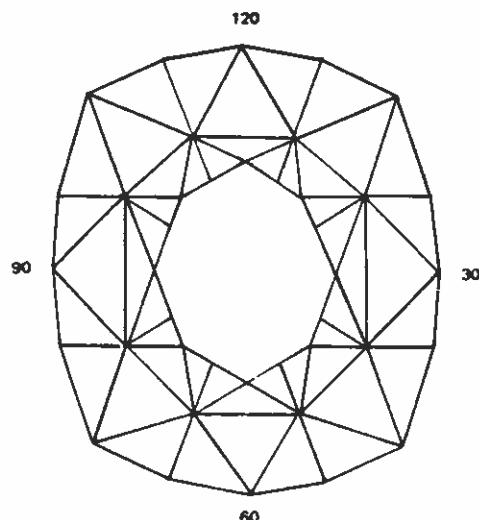
Preform girdle at 116-4-56-64, 29-31-89-91,
10-110-52-68, 22-38-82-98.

PAVILION

Step	Angle	Index
1	44°	116-4-56-64
2	43.5°	52-68-10-110
3	43.5°	22-38-82-98
4	44.5°	29-31-89-91
5	49°	120-60
6	45.5°	30-90
7	50°	16-44-76-104
8	54°	120-60
9	70°	30-90
10	55°	16-44-76-104
11	63°	116-4-56-64
12	71°	29-31-89-91
13	65°	52-68-10-110
14	67°	22-38-82-98

Polishing Order: Polish in same order as cutting.

Crown



CROWN

Step	Angle	Index
1	41.5°	120-60
2	45.5°	30-90
3	40°	16-44-76-104
4	49°	22-38-82-98
5	48.5°	29-31-89-91
6	47.5°	116-4-56-64
7	47°	10-110-52-68
8	39.5°	120-60
9	42°	30-90
10	37°	16-44-76-104
11	30.5°	116-4-56-64
12	36°	29-31-89-91
13	29.5°	10-110-52-68
14	28.5°	22-38-82-98
15	0°	Table -- use any setting

A Split-Mains Cushion by Merle A. Reinikka

This design is really only a modification of the Gabriel Regent---the single difference being the absence of additional culet facets in this pattern. Indexing given for the Gabriel Regent was for use with a 120 index, whereas the Split Mains Cushion utilizes a 96 index---an index gear more popularly used by most faceters.

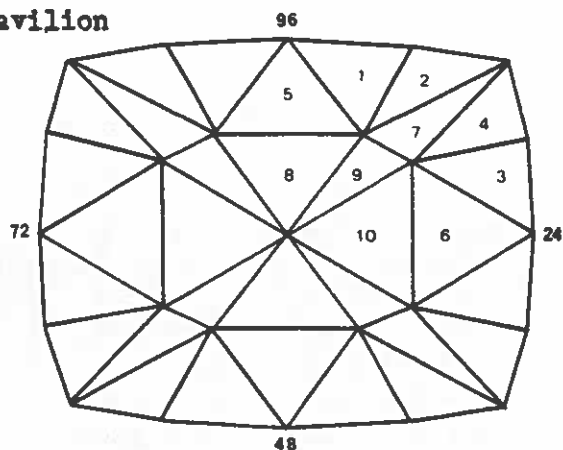
The prototype of this design was done in smoky quartz. The finished stone measured 17 x 20mm.

Cutting Directions

Preform girdle at 90°, indexing 94-2-46-50, 90-6-42-54, 23-25-71-73, 14-34-62-82.

Numbers outside the diagram indicate index reference points. Numbers inside the diagram indicate cutting order.

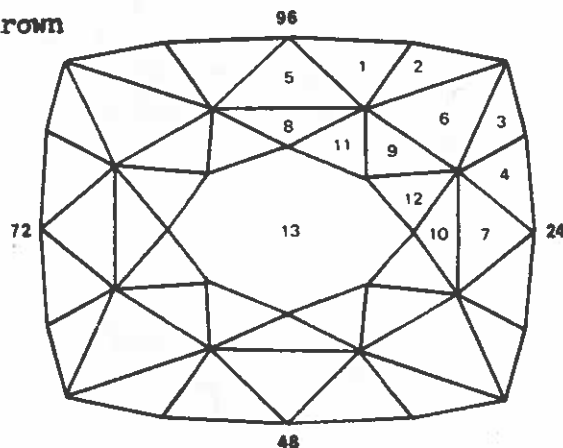
Pavilion



PAVILION

Step	Angle	Index
1	49.5°	94-2-46-50
2	50°	90-6-42-54
3	57°	23-25-71-73
4	53.5°	14-34-62-82
5	44.5°	96-48
6	55.5°	24-72
7	43°	10-38-58-86
8	41.5°	96-48
9	40.5°	10-38-58-86
10	40.5°	24-72

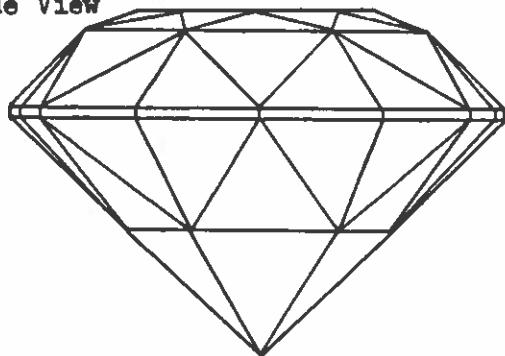
Crown



CROWN

Step	Angle	Index
1	46°	94-2-46-50
2	46°	90-6-42-54
3	49°	14-34-62-82
4	48.5°	23-25-71-73
5	41.5°	96-48
6	40°	10-38-58-86
7	45.5°	24-72
8	39.5°	96-48
9	39.5°	10-38-58-86
10	42°	24-72
11	29.5°	93-3-45-51
12	28.5°	20-28-68-76
13	0°	Table

Side View

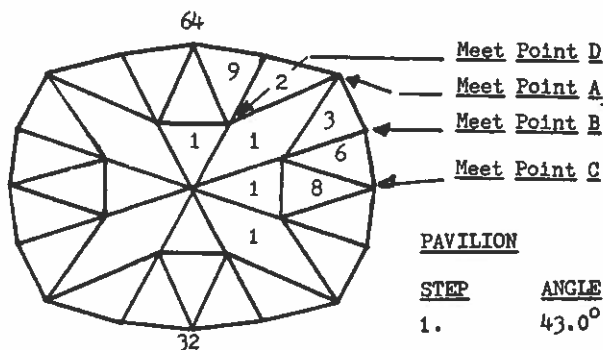


MEET POINT REGENT No.1

by Tom Brown
and Tom Ricks

Meet Point Regent # 1 is the first in a series adapting the regent shapes to the Meet Point method of faceting. Angles are for quartz. A direct conversion to "diamond" angles has worked well with cubic zirconia. The length/width ratio is 1.25/1.0. A 64 index is used.

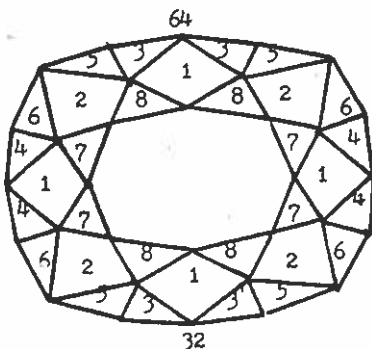
PAVILION



PAVILION

STEP	ANGLE	INDEX	COMMENT
1.	43.0°	08-24-40-56 64-16-32-48	Cut to same stop - establish culet.
2.	54.0°	03-29-35-61	Establish Meet Point A.
3.	46.0°	12-20-44-52	
4.	90.0°	03-29-35-61	Cut to Meet Point A -
5.	90.0°	12-20-44-52	
6.	46.0°	15-17-47-49	Establish level girdle.
7.	90.0°	15-17-47-49	Cut to Meet Point B.
8.	45.0°	16-48	Cut to level girdle.
9.	56.5°	01-31-33-63	Cut to Meet Points B & C.
10.	90.0°	01-31-33-63	Cut to Meet Points B & C.
11.	55.4°	64-32	Cut to Meet Point D.

CROWN



STEP	ANGLE	INDEX	COMMENT
1.	40.0°	64-32-16-48	Main facets
2.	34.0°	08-24-40-56	
3.	46.0°	01-63-31-33	Break facets.
4.	44.0°	15-17-47-49	
5.	47.5°	03-29-35-61	Star facets.
6.	46.0°	12-20-44-52	
7.	27.0°	12-20-44-52	Star facets.
8.	28.0°	02-62-30-34	
9.	0.0°	ANY	TABLE

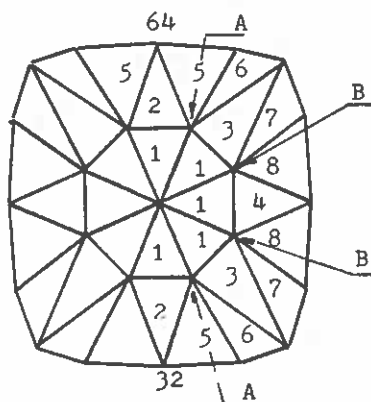
MEET POINT REGENT No.2

by Tom Ricks

This almost-square regent design has the pattern of facets shown as that of the "Polar Star" diamond in an article, "How To Cut The "Polar Star" Replica", by Tom R. Barbour - Lapidary Journal, June, 1963. The "Polar Star" is a 41.36 ct. stone described as the "brightest" diamond ever seen. It is thought to be of Indian origin and to have once belonged to Joseph Bonaparte, eldest brother of Napoleon I. It is presently set in a ring, but detaches to form a pendant.

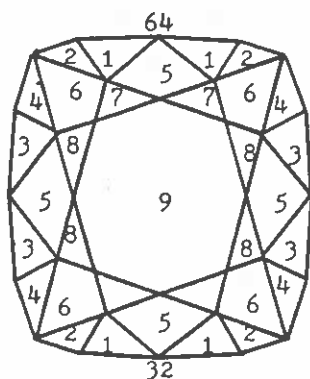
There are a number of differences between this design and the "Polar Star" or its replica. Meet Point Regent No. 2 has a faceted girdle and requires no preform. Also, in this design the indexing pattern for the crown break facets matches that for the pavilion breaks. In the referenced article, inexplicably, the crown and pavilion do not match. Many angle changes have been made to obtain accurate "meets".

Angles are for quartz using a 64 index. Facet the pavilion first.



PAVILION

STEP	ANGLE	INDEX	COMMENT
1.	43.0°	08-16-24=32 40-48-56-64	Cut to culet.
2.	55.0°	32-64	Establish meet point A.
3.	52.0°	08-24 40-56	Cut to point A Establish Pt. B
4.	58.0°	16-48	Cut to point B
5.	59.0°	02-62 30-34	Cut to point A
6.	58.5°	05-59 27-37	Cut to point A
7.	58.0°	11-21 43-53	Cut to point B
8.	60.0°	15-17 47-49	Cut to point B
9.	90.0°	02-62-30-34 05-59-27-37 11-21-43-53 15-17-47-49	Cut to level girdle.



CROWN

STEP	ANGLE	INDEX	COMMENT
1.	49.0°	02-62 30-34	Break facets. Match pavilion break
2.	48.6°	05-59 27-37	facets. Establish level girdle of required thickness.
3.	46.0°	15-17 47-49	
4.	46.0°	11-21 43-53	
5.	42.0°	64-32 16-48	Main facets. Point at girdle.
6.	38.0°	08-24 40-56	" "
7.	23.0°	04-60 28-36	Star facets.
8.	22.5°	12-20 44-52	Star facets.
9.	0.0°	ANY	TABLE

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ODE TO CLOSED MINDS

or

INTOLERANT? WHO, ME?

It just so happens I'm the guy
whose wisdom you cannot deny;
there's no one so astute as I
but we can get along
if you can only see the light,
can recognize your sorry plight
and grant that I am always right
and you are always wrong.

But if perchance you fail to see
the truth as it appears to me
and if you dare to disagree
with loftly thoughts I think,
you've made a very sad mistake,
you clearly have begun to flake,
you're nutty as a Christmas cake
and need to see a shrink.

B.E. Neiburg from GEM SCOOPS

NEW FACET MATERIAL - "LASERBLUE"

The advertizing announcement is quoted below.

"A vivid, electric shade of blue; A new laser element, now available for facet rough! Unbelievably beautiful! Similar to Alexandrium and Cubic Zirconia.

R. I. 1.5193 Hardness: 6.75 (but tough)

Cutting angles: Recommend colored quartz.

Polishing: Cerium oxide on tin, or Diamond all the way.

Chemically, a boro-silicate with a large percentage of copper coloring."
